WHAT IS CLAIMED IS:

1. A functional fluid having improved viscosity and volatility control under conditions of high thermal stress comprising:

a) a base stock or base oil, said base stock or base oil having the properties of:

(a) a viscosity index (VI) of greater than 130;

(b) a pour point of about -10C or lower;

(c) a ratio of measured-to-theoretical low-temperature viscosity equal to about 1.2 or less, at a temperature of about -30C or lower, where the measured viscosity is cold-crank simulator viscosity and where theoretical viscosity is calculated at the same temperature using the Walther-MacCoull equation wherein said base stock or base oil is not a Group IV base stock or base oil; and

b) at least one additive.

2. A functional fluid having improved viscosity and volatility control under conditions of high thermal stress comprising:

a) a base stock or base oil, said base stock or base oil having the properties of:

(i) a viscosity index (VI) of about 130 or greater;

(ii) a pour point of about -10C or lower;

(iii) a ratio of measured-to-theoretical low-temperature viscosity equal to about 1.2 or less, at a temperature of about -30C or lower, where the measured viscosity is cold-crank simulator viscosity and where theoretical viscosity is calculated at the same temperature using the Walther-MacCoull equation;

(iv) a percent Noack volatility no greater than that calculated by the formula

$$-6.882\text{Ln}(\text{CCS@-35C}) + 67.647,$$

where CCS@-35C is the base oil CCS viscosity in centipoise, tested at -35C, and that value as used in the equation is less than 5500 cP and wherein said base stock or base oil is not a Group IV base stock or base oil; and

b) at least one additive.

3. A lubricating having improved viscosity and volatility control under conditions of high thermal stress comprising:

a) at least one base stock or base oil wherein said base stock or base oil has a VI of at least 130 produced by a process which comprises:

(i) hydrotreating a feedstock having a wax content of at least about 60 wt.%, based on feedstock, with a hydrotreating catalyst under effective hydrotreating conditions such that less than 5 wt.% of the feedstock is converted to 650F (343C) minus products to produce a hydrotreated feedstock whose VI increase is less than 4 greater than the VI of the feedstock;

(ii) stripping the hydrotreated feedstock to separate gaseous from liquid product;

(iii) hydrodewaxing the liquid product with a dewaxing catalyst which is at least one of ZSM-48, ZSM-57, ZSM-23, ZSM-22, ZSM-35, ferrierite, ECR-42, ITQ-13, MCM-71, MCM-68, beta, fluorided alumina, silica-alumina or fluorided silica alumina under catalytically effective hydrodewaxing conditions wherein the

dewaxing catalyst contains at least one Group 9 or Group 10 noble metal; and

b) at least one additive.

4. A functional fluid having improved viscosity and volatility control under conditions of high thermal stress comprising:

a) at least one base stock or base oil wherein said base stock has a VI of at least 130 produced by a process which comprises:

(i) hydrotreating a lubricating oil feedstock having a wax content of at least about 50 wt.%, based on feedstock, with a hydrotreating catalyst under effective hydrotreating conditions such that less than 5 wt.% of the feedstock is converted to 650F (343C) minus products to produce a hydrotreated feedstock to produce a hydrotreated feedstock whose VI increase is less than 4 greater than the VI of the feedstock;

(ii) stripping the hydrotreated feedstock to separate gaseous from liquid product;

(iii) hydrodewaxing the liquid product with a dewaxing catalyst which is at least one of ZSM-22, ZSM-23, ZSM-35, ferrierite, ZSM-48, ZSM-57, ECR-42, ITQ-13, MCM-68, MCM-71, beta, fluorided alumina, silica-alumina or fluorided silica-alumina under catalytically effective hydrodewaxing conditions wherein the dewaxing catalyst contains at least one Group 9 or 10 noble metal;

(iv) hydrofinishing the product from step (3) with a mesoporous hydrofinishing catalyst from the M41S family under hydrofinishing conditions; and

b) at least one additive.

5. A functional fluid having improved viscosity and volatility control under conditions of high thermal stress comprising:

a) at least one base stock wherein said base stock has a VI of at least 130 produced by a process which comprises:

(i) hydrotreating a lubricating oil feedstock having a wax content of at least about 60 wt.%, based on feedstock, with a hydrotreating catalyst under effective hydrotreating conditions such that less than 5 wt.% of the feedstock is converted to 650F (343C) minus products to produce a hydrotreated feedstock to produce a hydrotreated feedstock whose VI increase is less than 4 greater than the VI of the feedstock;

(ii) stripping the hydrotreated feedstock to separate gaseous from liquid product;

(iii) hydrodewaxing the liquid product with a dewaxing catalyst which is ZSM-48 under catalytically effective hydrodewaxing conditions wherein the dewaxing catalyst contains at least one Group 9 or 10 noble metal;

(iv) Optionally, hydrofinishing the product from step (3) with MCM-41 under hydrofinishing conditions; and

b) at least one additive

6. The functional fluid as in any one of claims 3, 4, or 5, wherein said feedstock is a synthetic gas to liquid feedstock.

7. The functional fluid as in any one of claims 3, 4, or 5, wherein said feedstock is made by a Fischer-Tropsch process.

8. A functional fluid of claims 1, 2, 3, 4 or 5 comprising at least one performance enhancing additive.

9. A functional fluid of claims 1, 2, 3, 4 or 5 comprising at least one performance enhancing additive where said performance enhancing additive is not a viscosity index improver.

10. A functional fluid of claims 1, 2, 3, 4 or 5 where said functional fluid is a circulating oil.

11. A functional fluid of claims 1, 2, 3, 4 or 5 where said functional fluid is a compressor oil.

12. A functional fluid of claims 1, 2, 3, 4 or 5 where said functional fluid is an internal lubricant for sintered metal materials.

13. The method of making a functional fluid having improved viscosity and volatility control under conditions of high thermal stress comprising incorporating a base stock or base oil having the properties of

(a) a viscosity index (VI) of 130 or greater,

(b) a pour point of -10C or lower,

(c) a ratio of measured-to-theoretical low-temperature viscosity equal to 1.2 or less, at a temperature of -30C or lower, where the measured viscosity is cold-crank simulator viscosity and where theoretical

viscosity is calculated at the same temperature using the Walther-MacCoull equation.

wherein said base stock or base oil is not a Group IV base stock or base oil.

14. The method of making a functional fluid having improved viscosity and volatility control under conditions of high thermal stress comprising incorporating a base stock or base oil having the properties of

(a) a viscosity index (VI) of 130 or greater,

(b) a pour point of -10C or lower,

(c) a ratio of measured-to-theoretical low-temperature viscosity equal to 1.2 or less, at a temperature of -30C or lower, where the measured viscosity is cold-crank simulator viscosity and where theoretical viscosity is calculated at the same temperature using the Walther-MacCoull equation, and

(d) a percent Noack volatility no greater than that calculated by the formula

$$-6.882\text{Ln}(\text{CCS@-35C}) + 67.647,$$

where CCS@-35C is the base oil CCS viscosity in centipoise, tested at -35C, and that value as used in the equation is less than 5500 cP, and

wherein said base stock or base oil is not a Group IV base stock or base oil.

15. A method of reducing the Noack volatility of a functional fluid comprising incorporating said base stock or base oil of any one of the claims 1, 2, 3, 4 or 5.